

24. (New) The vinyl polymer according to claim 13, wherein said terminal functional group is the crosslinking silyl group of the general formula (1).

BY 25. (New) The vinyl polymer according to claim 13, wherein said terminal functional group is the hydroxyl group of the general formula (8), (9), (10), (11) or (12).

REMARKS

Claims 13-22 and 24-25 are now in the application.

Claim 13 has been amended to include the recitations of claim 23 and claim 23 has been canceled. Moreover, claim 13 has been amended by including recitations concerning the vinyl polymer based on the description on page 6, line 11 – page 7, line 18 in the original specification (on page 8, line 20 – page 10, line 10 in the substitute specification filed on August 20, 2001).

Claims 17 and 20-21 have been amended for purposes of clarity. New claim 24 relates to the terminal silyl group, and new claim 25 relates to the terminal hydroxyl group.

The objection of claims 20 and 21 under 37 CFR 1.75(c) overcome the amendments of claims 20-21.

Claims 13-15 and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by Handlin, Jr., *et al.* or Bronstert, *et al.* Claims 19 and 20 were rejected under 35 U.S.C. § 102(b) or under 35 U.S.C. § 103 as obvious over Handlin, Jr., *et al.* or Bronstert. Claims 13-20 and 23 were rejected under 35 U.S.C. § 102(e) as being anticipated by Matyjaszewski, *et al.*

With respect to the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 102(e), the cited references failed to anticipate the present invention.

The present invention after the above amendments relates to a vinyl polymer which has at least one terminal functional group per molecule and has a ratio of weight average molecular weight of less than 1.8; said terminal functional group being a crosslinking silyl group of the general formula (1) or a hydroxyl group of the general formula (8), (9), (10), (11) or (12); and

the vinyl polymer is obtained by polymerization of a monomer containing at least one member selected from the group consisting of a (meth)acrylic monomer, a styrenic monomer and a nitrile-containing vinyl monomer.

On the other hand, Handlin suggests only isoprene polymer having a terminal hydroxyl group. Therefore, the polymer of the present invention differs from that of Handlin. Accordingly, the present invention is novel over Handlin.

Bronstert suggests only butadiene or isoprene polymer having a terminal hydroxyl group. Therefore, the polymer of the present invention differs from that of Bronstert. Accordingly, the present invention is novel over Bronstert.

Matyjaszewski suggests only PMMA having -OH at the end of the polymer. Therefore, the polymer of the present invention differs from that of Matyjaszewski. Accordingly, the present invention is novel over Matyjaszewski.

With respect to the rejection under 35 U.S.C. § 103(a), as mentioned above, the polymer of the present invention differs from the polymers of the references. Moreover, the above-references fail to disclose a polymer having the terminal functional group of the general formula (1), (8), (9), (10), (11) or (12) of the present invention, and fail to remotely suggest how to obtain the specific polymer of the present invention. Therefore, one skilled in the art would not have appreciated the present invention from each of the above references, or from any combination of the above references. Accordingly, the present invention is unobvious over the cited references.

The cited references fail to anticipate the present invention. In particular, anticipation requires the disclosure, in a prior art reference, of each and every recitation as set forth in the claims. See *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986), and *Akzo N.V. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir. 1986).

There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. § 102. See *Scripps Clinic and Research Foundation v. Genetech, Inc.*, 18 USPQ2d 1001 (CAFC 1991) and *Studiengesellschaft Kohle GmbH v. Dart Industries*, 220 USPQ 841 (CAFC 1984).

Concerning the rejection under 35 U.S.C. § 103 the reliance upon inherency is misplaced since inherency requires that the recited results or structure must necessarily be obtained not merely that it might be achieved. *See Electra Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 32 USPQ2d 1017 (Fed. Cir. 1994); *In re Oelrich*, 212 USPQ 323 (CCPA 1981) and *In re Robertson*, 49 USPQ2d 1949 (Fed. Cir. 1999).

Also, *see In re Robertson, et al.* 49 USPQ2d 1949 (1999 Fed. Cir.). In this case, Robertson filed a patent application concerning a paper diaper. The application claimed a paper diaper having (a) two fasteners so that the diaper could be worn on a baby and (b) a third fastener for rolling up and fixing the used diaper. The Patent Office Rejected the invention under 35 U.S.C. § 102 based on “Principles of Inherency” as the invention is “anticipation” by the prior art.

The prior art (Wilson) relied upon a disclosed diaper, which had two snaps in front and back of the diaper in order to be worn by a baby and which may further have a stripe in order to fasten the diaper to baby’s body. Wilson describes that the used diaper can be easily dealt with by rolling by and fixing it with the snaps. Accordingly, the Patent Office considered that the diaper of Wilson inherently has an ability to be rolled up and fixed after use and decided that the claimed diaper is anticipated by the diaper of Wilson. The Federal Circuit, however, held that it recognized that the constitution of the invention is inherently present in the prior art, only when it is clearly shown that the constitution of the invention is necessarily present in the prior art by eternal evidence. The invention can not be rejected based on “inherency” because of probability or possibility of the presence of the constitution in the prior art. Also *see Crown Operations International Ltd. v. Solutia* 24 USPQ2d 1917 (Fed. Cir. 2002).

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **“Version with markings to show changes made.”**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

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Respectfully submitted,

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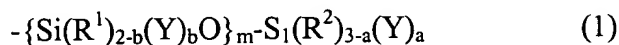
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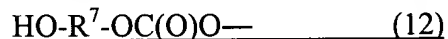
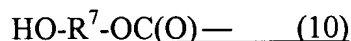
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Version With Markings to Show Changes Made

13. (Amended) A vinyl polymer which has at least one terminal [function] functional group per molecule and has a ratio of weight average molecular weight to number average molecular weight of less than 1.8 as determined by gel permeation chromatography, said terminal [function] functional group being a crosslinking silyl group of the general formula (1) shown below, or a hydroxyl group of the general formula (8), (9), (10), (11) or (12) shown below,



wherein R^1 and R^2 each independently represents an alkyl group containing 1 to 20 carbon atoms, an aryl group containing 6 to 20 carbon atoms, an aralkyl group containing 7 to 20 carbon atoms, or a triorganosiloxy group of the formula $(\text{R}')_3\text{SiO}-$, R' being a monovalent hydrocarbon residue containing 1 to 20 carbon atoms and the three R' groups being the same or different, provided that when a plurality of R^1 or R^2 groups occur, they may be the same or different; Y represents a hydroxyl group or a [hydrolysable] hydrolyzable group, provided that when a plurality of Y groups occur, they may be the same or different; a represents 0, 1, 2 or 3, b represents 0, 1 or 2, and m represents an integer of 0 to 19, provided that the condition $a + mb \geq 1$ should be satisfied;



wherein R^6 represents an alkylene group containing 1 to 20 carbon atoms, an arylene group containing 6 to 20 carbon atoms or an aralkylene group containing 7 to 20 carbon atoms, which may contain one or more ether bonds; and R^7 represents an alkylene group containing 1 to 20 carbon atoms, an arylene group containing 6 to 20 carbon atoms or an aralkylene group containing 7 to 20 carbon atoms, and may contain one or more ether bonds; and said vinyl polymer being obtained by polymerization of a monomer containing at least one member selected from the group consisting of a (meth)acrylic monomer, a styrenic monomer and a nitrile-containing vinyl monomer.

17. (Amended) The polymer according to claim 13, wherein its [amin] main chain is a (meth)acrylic polymer.

20. (Amended) The polymer according to claim 13 as produced by converting a terminal halogen group of the halogen-terminated vinyl polymer to a crosslinking [silyl] silyl containing [substituent, an alkenyl containing substituent] substituent or a hydroxyl-containing [substituent] substituent.

21. (Amended) The crosslinking silyl-terminated vinyl polymer according to claim [12] 13, wherein Y in general formula (1) is a hydrogen atom, a halogen atom, a hydroxyl, alkoxyl, ketoximate, amino, amido, aminoxyl, mercapto or alkenyloxyl group, provided that when a plurality of Y groups occur, they may be the same or different with each other.